Vital Statistics Indicators
Diabetes-Related Deaths

Diabetes-Related Death Rates
Michigan Residents

Age-adjusted rate per 100,000 population

Year	Underlying Cause	Contributing Cause
1992	24.5	56.6
1993	24.0	55.3
1994	25.0	55.5
1995	24.8	55.5
1996	25.4	54.8
1997	26.0	53.8
1998	25.8	55.8
1999*	26.7	55.6
2000*	27.2	55.7
2001*	27.4	54.9

☐ Underlying Cause   ☐ Contributing Cause
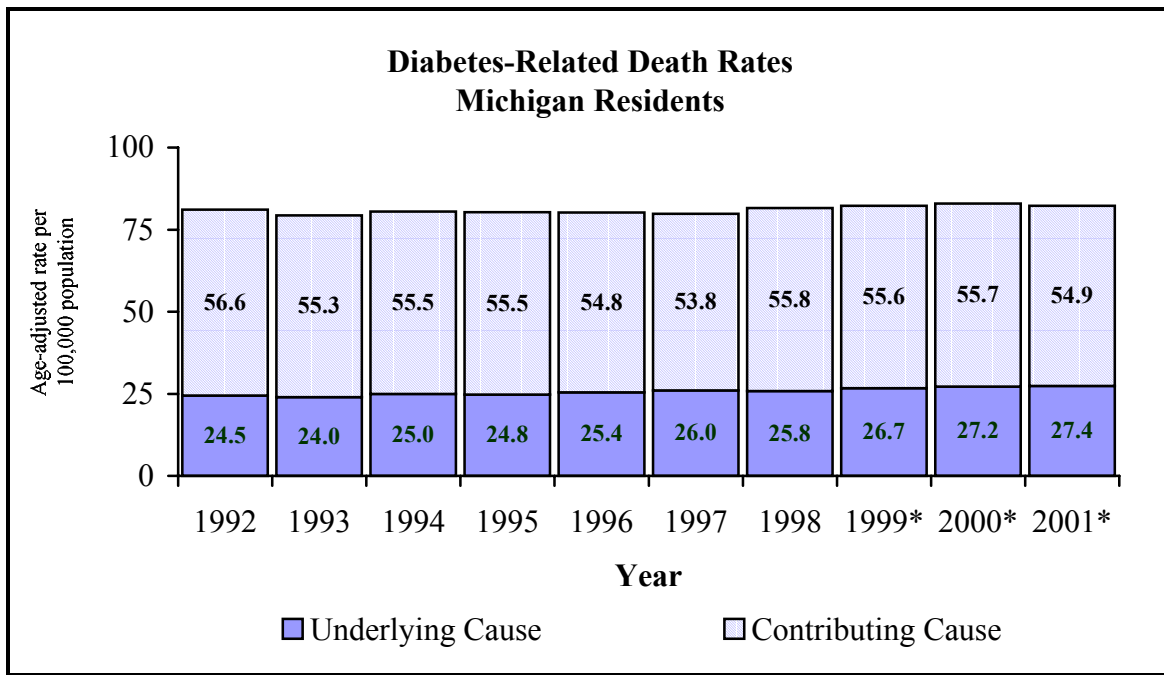
* Death data based on ICD-10 coding. See *Technical Notes* for detailed explanation on ICD coding changes.
Source: Division for Vital Records and Health Statistics, MDCH

How are we doing?

Diabetes deaths, as an underlying cause, is the sixth leading cause of all deaths in Michigan and the ninth leading cause of Years of Potential Life Lost (YPLL) for people below the age of 75. There are two ways to measure diabetes deaths: 1) diabetes underlying cause deaths that are based on the number of deaths with diabetes listed as an underlying cause on the death certificate, and 2) diabetes-related deaths which are based on the number of deaths with diabetes listed as an underlying cause *plus* deaths which list diabetes as a contributing cause or other significant condition.

Diabetes is a chronic disease characterized by high glucose levels due to reduced levels of insulin produced by the pancreas or the body's inability to use insulin. It is associated with increased risk of heart attack, blindness, birth defects, amputation, and kidney failure.

In 2001, there were 2,640 deaths due to diabetes as an underlying cause and an additional 5,269 deaths in which diabetes was a contributing factor for a total of 7,909 *diabetes-related* deaths to Michigan residents. The age-adjusted rate for diabetes-related deaths was 82.3 per 100,000 population. Diabetes-related death rates have been increasing during the past 10 years.
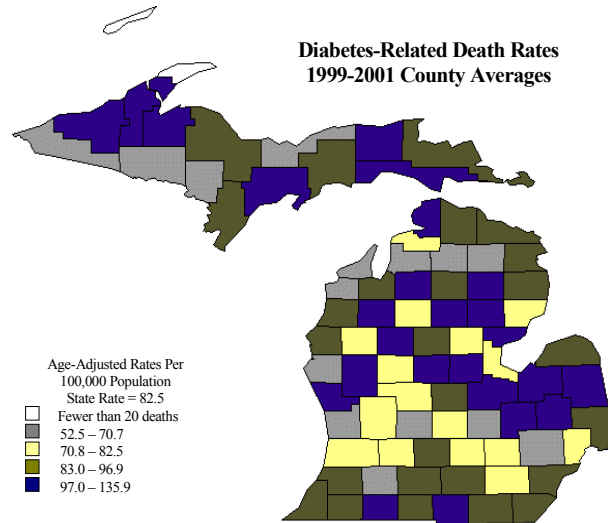
How does Michigan compare with the U.S.?

Michigan's 2001 age-adjusted rate for diabetes deaths of 27.4 was higher than the U.S. preliminary rate of 25.2, and reflects deaths due to diabetes when the disease is listed as an underlying cause of death. Diabetes was the sixth leading cause of all deaths in the U.S. and the eleventh leading cause of YPLL in 1999.

How are different populations affected?

Diabetes is more common in older people. In 2001, 55 percent of Michigan's diabetes-related deaths occurred to individuals aged 75 or older.

Diabetes is also more common among African-Americans when compared to whites. In 2001, the age-adjusted diabetes-related death rates for Michigan's African-American men and women were 127.2 and 116.3 respectively, compared with 96.6 and 64.2 for white men and women.

Diabetes-Related Death Rates
1999-2001 County Averages

Age-Adjusted Rates Per
100,000 Population
State Rate = 82.5
☐ Fewer than 20 deaths
52.5 – 70.7
70.8 – 82.5
83.0 – 96.9
97.0 – 135.9

For more state and local data on diabetes related deaths, visit the Michigan Department of Community Health Web site at ***www.michigan.gov/mdch***.

What other information is important to know?

There are three common types of diabetes: Type 1, Type 2 and gestational diabetes. Type 1 diabetes is an autoimmune disease and generally develops in children and young adults although it can appear at any age. Symptoms included excessive thirst and urination, constant hunger, weight loss, blurred vision and fatigue and may occur rapidly necessitating a physician visit or emergency room visit.

Type 2 diabetes accounts for approximately 90% of people with diabetes. It is associated with the inability of the body cells to use insulin effectively. It usually has a gradual onset and occurs mainly in people over the age of 30, most of who are overweight. Symptoms are similar to type 1 diabetes but develop more slowly.

Gestational diabetes develops or is discovered during pregnancy. It generally disappears when the pregnancy is over, but women who had gestational diabetes are at greater risk of developing type 2 diabetes later in life.

What is the Department of Community Health doing to affect this indicator?

The department is actively working to decrease the prevalence and impact of diabetes on the citizens in Michigan. The Michigan Diabetes Prevention and Control Program (MDPCP) funds programs and projects to improve the availability and delivery of diabetes services and develop prevention and control initiatives to assist in delaying and/or preventing the development of diabetes and its complications. Some of the major projects include:

The Michigan Diabetes Outreach Network (there are six (6) Diabetes Outreach Networks that cover the entire State of Michigan) effects change by working with health care providers through the Diabetes Care Improvement Project, conducting professional education activities, and participation in consumer awareness and advocacy initiatives.

The State Certification for Diabetes Self-Management Education Programs assures that programs adhere to national and state standards for self-management education programs. Currently there are 77 programs, which provide self-management education to over 18,000 people annually.

The MDPCP continues to partner with the Michigan Association of Health Plans in implementation of the "Taking On Diabetes In Michigan Initiative." This initiative promotes the use of diabetes standards of care and clinical guidelines for health care providers in managed care.

Joining People with Diabetes is a statewide initiative that provides support group leader trainings in establishing regional diabetes support networks. The group also provides current information about the availability of support groups in the state.

There is collaboration with national agencies such as CDC to implement CDC campaigns such as Flu/Pneumococcal initiative, National Diabetes Education Program, Diabetes Collaborative Project and others.

The WIC Division's Project FRESH Program provides access to Michigan-grown fruits and vegetables and nutrition education for low-income pregnant breastfeeding and postpartum women and children ages 1 through 5, who are at nutritional risk. Fresh fruits and vegetables contain vitamin A, vitamin C, and phytochemicals, which research suggests is a contributing factor in reducing the risk of diabetes.

Last Updated: May 2003